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Serial No. 10/520,045

**IN THE CLAIMS:**

Please amend the claims, as follows:

1. (Currently amended): A filter for an open system interconnection layer2 traffic separation in at least one Access Switching Router (42,44) in a network (40), having ports in the at least one router ~~outers~~ (42,44) configured to the same virtual local area network, said filter filtering data packet traffic to said ports, characterized in that the filter ~~it~~ comprises:

means for intercepting layer2 traffic from a network connected source device (HostA, HostB) for a Media Access Control address belonging to said virtual local area network, and determining if the traffic is permitted to be forwarded to other ports;

means for intercepting Address Resolution Protocol broadcasts in such traffic, responding to said broadcast to said source device (HostA, HostB) regardless if a destination device layer2 domain is the same as source device layer2 domain, said source device (HostA, HostB) thus determining that the broadcast has acknowledged the layer2 address of a sought destination device (HostC, HostD), whereby the source device (HostA, HostB) transmits data packets to the destination device (HostC, HostD), said at least one router ~~outers~~ receiving said transmitted data packets;

means for determining an ~~the~~ egress port to said sought destination device (HostC, HostD);

means for determining the layer2 address of said sought destination device (HostC, HostD);

means for adjusting the layer2 header from said received data packet by ~~said means~~

Serial No. 10/520,045

for setting the source layer2 address to ~~setting said~~ at least one router's source address for the data packets, ~~and by said means for determining~~ the layer2 address of the sought destination device (HostC, HostD) ~~and~~ setting the destination layer2 address to that of the sought destination device (HostC, HostD), ~~and~~ transmitting the data packet to the sought destination device (HostC, HostD); and

thus simulating that if the source device (HostA, HostB) and sought destination device (HostC, HostD) is in the same layer2 domain, the router layer2 address is the actual destination address both for the source and destination device, or simulating that if the source device and sought destination device are not in the same layer2 domain but in the same layer3 subnet, the router layer2 address is the actual destination layer2 address for the source to the destination.

2. (Currently amended): A filter according to claim 1, characterized in that a port that resides in a sub router (42,44) is provided with said at least one router ~~routers~~ (42,44) layer2 address when addressing the sought destination device (HostC).

3. (Currently amended): A filter according to claim 1, characterized in the at least one router (42,44) is investigating the source or ~~and/or~~ destination address to determine the best exit port for the packet, to determine if the packet is in profile for rate-limiting, or to do other filtering based on information in the open system interconnection layer3 and higher protocol layers.

Serial No. 10/520,045

4. (Currently amended): A filter according to claim 1, characterized in that the at least one router (42,44) is a combination of a layer2 switch and a layer3 router, combining the capabilities of layer2 switching with advanced packet control and forwarding decisions in a layer3 router.

5. (Previously presented): A filter according to claim 1, characterized in that the filter provides for the use of one IP subnet, spreading it over several premises and a multiple of Access Switching Router and the same subnet in multiple layer2 domains, whereby it is covering more customers.

6. (Previously presented): A filter according to claim 5, characterized in that it is providing a customer having multiple computers to receive more addresses.

Serial No. 10/520,045

7. (Currently amended): A method for a filter for an open system interconnection layer2 traffic separation in at least one Access Switching Router (42,44) in a network (40), having ports in the at least one router ~~routers~~ (42,44) configured to the same virtual local area network, said filter filtering data packet traffic to said ports, characterized in that the method filter ~~comprises~~:

intercepting layer2 traffic from a network connected source device (HostA, HostB) for a Media Access Control address belonging to said virtual local area network, and determining if the traffic is permitted to be forwarded to other ports;

intercepting Address Resolution Protocol broadcasts in such traffic, responding to said broadcast to said source device (HostA, HostB) regardless of if a destination device layer2 domain is the same as source device layer2 domain, said source device (HostA, HostB) thus determining that the broadcast has acknowledged the layer2 address of a sought destination device (HostC, HostD), whereby the source device (HostA, HostB) transmits data packets to the sought destination device (HostC, HostD), said at least one router ~~routers~~ receiving said transmitted data packets;

determining an ~~the~~ egress port to said sought destination device (HostC, HostD);

determining the layer2 address of said destination device (HostC, HostD);

adjusting the layer2 header from said received data packet, by said means for setting the source layer2 address to, ~~setting~~ said at least one router's source address for the data packets and setting, ~~said means for determining~~ the layer2 address of the destination device (HostC, HostD), ~~setting the destination layer2 address to that of the destination device~~

Serial No. 10/520,045

(HostC, HostD), and transmitting the data packet to the sought destination device (HostC, HostD); and

thus simulating that if the source device (HostA, HostB) and sought destination device (HostC, HostD) are ~~is~~ in the same layer2 domain, the router layer2 address is the actual destination address both for the source and destination device, or simulating that if the source device and destination device are not in the same layer2 domain but in the same layer3 subnet, the router layer2 address is the actual destination layer2 address for the source to the destination.

8. (Currently amended): A method according to claim 7, characterized in that a port that resides in a sub router (42,44) is provided with said at least one router ~~routers~~ (42,44) layer2 address when addressing the sought destination device (HostC).

9. (Currently amended): A method according to claim 7, characterized in that the method comprises investigating with the router (42,44) is investigating the source or ~~and/or~~ destination address to determine the best exit port for the packet, to determine if the packet is in profile for rate-limiting, or to do other filtering based on information in the open system interconnection layer3 and higher protocol layers.

Serial No. 10/520,045

10. (Currently amended): A method according to claim 7, characterized in that the at least one router (42,44) is a combination of a layer2 switch and a layer3 router, combining the capabilities of layer2 switching with advanced packet control and forwarding decisions in a layer3 router.

11. (Previously presented): A method according to claim 7, characterized in that the method provides for the use of one IP subnet, spreading it over several premises and a multiple of Access Switching Router and the same subnet in multiple layer2 domains, whereby it is covering more customers.

12. (Previously presented): A method according to claim 11, characterized in that the method provides for a customer having multiple computers to receive more addresses.